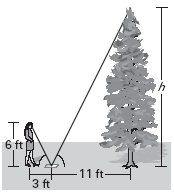
**Homework 47H** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Similar Triangles – SSS & SAS** Period:\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle.**

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| 1) Is either Δ*LMN* o*r* Δ*RST* similar to Δ*ABC*? | | 2) Determine whether the two triangles are similar. If they are similar, write a similarity statement and find the scale factor of Δ*A* to Δ*B.* |
| 3) Show that the triangles are similar and write a similarity statement. *Explain* yourreasoning. | | 4) Show that the triangles are similar and write a similarity statement. *Explain* yourreasoning. |
| 5) Δ*ACE* ~Δ*DCB.* Find the length of AB. | 6) Sketch the triangles using the given description. *Explain* whether the two triangles can be similar.  🡪 In Δ*ABC, AB =* 15, *BC =* 24 and *m*∠*B =* 38°.  🡪 In Δ*DEF*, *DE =* 5, *EF =* 8 and *m*∠*E* = 38°. | |

7) In order to estimate the height *h* of a tall pine tree, a student places a mirror on the ground and stands where she can see the top of the tree, as shown. The student is 6 feet tall and stands 3 feet from the mirror which is 11 feet from the base of the tree.



a. What is the height *h* (in feet) of the pine tree?

b. Another student also wants to see the top of the tree. The other student is 5.5 feet tall. If the mirror is to remain 3 feet from the student's feet, how far from the base of the tree should the mirror be placed?

REVIEW:

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| --- | --- |
| 8) Determine whether the triangles can be proved similar. If they are similar, write a similarity statement. *Explain* your reasoning. | 9) Determine whether the given information implies DE || BC. |
| 10) Determine a value of the variable so that  DE || BC. | 11) Find the value of x: |